VERMONT MARBLE QUARRY
SW¼ NE¼ NE¼ Section 4, T5N, R1E
Broadwater County
Montana

HAER No. MT-11

HAER,
MONT,
4-RADBU.V,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Rocky Mountain Regional Office
Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

HISTORIC AMERICAN ENGINEERING RECORD
Vermont Marble Quarry

I. INTRODUCTION

Location:	Two and 1/4 miles (3-1/2 km) northeast from the town of Radersburg in Broadwater County, Montana. The quarry was at the southern point of the Limestone Hills in the SW1/4 of the NE1/4 of the NE1/4 of Section 4, T5N, R1E.
Quad:	Radersburg, Mont. - 1:62500 - 1949
UTM:	12/5118600/453550
Date of Operation:	1928-1929 and (briefly) 1937
Present Owner:	Dan Williams Radersburg, Montana
Present Use:	Abandoned
Significance:	The quarry was the only place where Meagher Limestone was quarried. The gray limestone is mottled with yellowish-orange spots and was marketed as "Montana Black and Gold Marble". It was used for facing stone on a number of public buildings in Helena, as well as being sold on the west and east coasts. The mast for the "J-rig" derrick was reportedly the largest single timber ever shipped into Montana. Although in operation for only a brief period of time, the quarry produced a somewhat unique product for Montana.
Historian:	Paul Anderson, GCM Services, Inc., May 1986.

II. HISTORY

The land on which the site is located was originally patented to Dwight Hatcher as a homestead entry (patent no. 279) on June 15, 1872.[1] Although outcrops of the mottled black and orange Meagher limestone (mistakenly referred to as a "marble") occurred at several localities in the area, no attempts to quarry the stone were made until the 1920s. In 1928 the Vermont Marble Company of Proctor, Vermont, selected the site at the southern point of the Limestone Hills two miles northeast of Radersburg after conducting extensive core drilling tests throughout the area. The drilling revealed large formations of the attractive gray and orange limestone which was later marketed as "Montana Black and Gold Marble". [2]

In 1929 John Devine, the manager of the quarry, organized a crew of six men and began intensive work at the site. Company officials - Director M. R. Proctor and Western Director W. R. Dunsmore - approved expansion plans and by the end of the season the quarry had reached a depth of 40 feet (12 m). Slabs of four, 12 and 16 tons were cut from the quarry with steam-powered drills. These were shipped out of the state to be cut and polished and then were returned to Montana where they were sold.[3] Some of the limestone was used as a base under other marble die; some was shipped to the east and west coasts; while other sheets were used for decorative purposes, including a number of public buildings in Helena.[4]

Up to this point only temporary means were used to work the quarry although there is no mention as to the exact type of equipment and techniques used. In 1930, however, plans were made to develop the quarry for long-term, large-scale production. Electric power was installed and the necessary equipment for sustained production was brought in although, again, no reports exist to indicate what type of

machinery was to be used. One aspect in the development of the quarry which did receive notice was the timber shipped in from the west coast for use as the mast of the "J-rig" derrick. It was reported to have been the largest single timber ever shipped into the area. The timber required the use of two railroad flat cars to convey it to Brown Brothers Lumber Company in Townsend, Montana. From there it was transported by several wagons to the quarry site.[5]

The mast, which measures approximately 50 feet (15 m) high, sits in a metal, swivel base anchored to a concrete base. The metal base also contains a pulley wheel and cup which held the J-rig's horizontal boom which measured 37 feet (11 m) long. The end of the boom had a similar cup and pulley wheel with a secondary, small double-sheave pulley wheel which probably functioned as part of a block and tackle system to provide additional mechanical advantage to lift the heavy stone blocks. The end pulley appears attached to the top of the mast by a cable, indicating the boom was normally in a fixed position. The metal base and pulleys were cast by F.R. Patch Manufacturing Company of Rutland, Vermont. No records, foundations or other remains were on the site which would indicate the type of engine used to power the J-rig. It is also possible that development work on the site did not progress to the point where the planned electric motor drive for the rig was actually installed and used.

It is not known if the quarry actually went into production during the 1930 season. In any case, just when the quarry was poised to begin large-scale production, a dispute arose between the company and the land owners and the operation was abruptly closed down.[6] The quarry sat idle until 1937 when it was briefly put back into production for about three months when, once again, it abruptly closed - this time because of adverse commodity freight rates to the east coast.[7]

The quarry, at the time of its closing, measured 30 by 50 feet (9 by 15 m), and had reached a depth of 60 feet (18 m). The quarry had developed beds of the Lower Cambrian Meagher formation on the east limb of a north-trending anticline.[8] Freeman and others reported that the gray bulk part of the rock is finely crystalline pure calcite while the irregular yellowish-orange mottles and ribbons are composed of dolomite and some silt.[9]

The Vermont Marble Quarry was, at no point, a large operation. The facilities at the site never consisted of more than the quarry pit, the J-rig and a small shack (probably the office) of which only a pile of debris remained. No inovative or unique technological development occurred during the operation of the quarry but the product itself was somewhat unique, being the only place where Meagher Limestone was quarried in Montana. The effort and expense of transporting the hugh timber for the J-rig mast was indicative of the company's intent to develop the quarry on a large commercial scale. Although the enterprise failed, it is significant as an attempt to develop this area's somewhat unique resource.

III. FOOTNOTES

1. Bureau of Land Management patent records, Billings, Montana.

2. Berg, Richard B., Building Stone in Montana, p. 18; Broadwater County Historical Society, Broadwater Bygones, p. 73; Trauerman, Carl J. and Reyner, Millard L., Directory of Montana Mining Properties, p. 14.

3. Broadwater Historical Society, Broadwater Bygones, p. 73.

4. Ibid., p. 73. Mining Journal, 30 October, 1928.

5. Broadwater Historical Society, Broadwater Bygones, p. 73

6. Ibid., p. 73.

7. Reed, Glenn C., Mines and Mineral Deposits (Except Fuels) Broadwater County, Montana, p. 57.

8. Berg, Richard B., Building Stone in Montana, p. 18.

9. Freeman, V.L., Ruppel, E.T. and Klepper, M.R., Geology of Part of the Townsend Valley Broadwater and Jefferson Counties, Montana. p. 492.

IV. BIBLIOGRAPHY

Berg, Richard E., Building Stone in Montana, Montana Bureau of Mines and Geology Bulletin 94, Butte, Montana College of Mineral Science and Technology, 1974.

Broadwater County Historical Society, Broadwater Bygones, Bozeman; Color World of Montana, Inc., 1977.

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Freeman, V.L., Ruppel, E.T. and Klepper, M.R., Geology of Part of the Townsend Valley Broadwater and Jefferson Counties, Montana, Geological Survey Bulletin 1042-N, Washington, D.C., United States Government Printing Office, 1958.

Reed, Glenn C., Mines and Mineral Deposits (Except Fuels) Broadwater County, Montana. Bureau of Mines Information Circular 7592, Washington D.C., United States Oepartment of the Interior, 1951.

Trauerman, Carl J. and Reyner, Millard L., Directory of Montana Mining Properties, Butte, Montana Bureau of Mines and Geology Memoir 31, Montana School of Mines, 1950.

"Vermont Marble," Mining Journal, Vol. 12, No. 11 (October 30, 1928), 44.